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*Admitted only in Maryland
*Admitted only in Virginia
*Practice limited to
Federal Agencies

August 11, 2005

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Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Art Unit 2124

Re: U.S. Utility Patent Application
Application No. 09/987,193; Filed: November 13, 2001
For: **Method and Apparatus for A Parallel Correlator and Applications
Thereof**
Inventors: RAWLINS *et al.*
Our Ref: 1744.1200001

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Fourth Supplemental Information Disclosure Statement;
2. Form PTO-1449 (3) pages;
3. Copy of Doc. No. AQ59; and
4. ONE (1) return postcard.

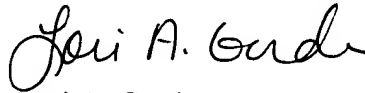
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents
August 11, 2005
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Lori A. Gordon". The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

Lori A. Gordon
Attorney for Applicants
Registration No. 50,633

LAG/mjg
Enclosures



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

RAWLINS *et al.*

Appl. No.: 09/987,193

Filed: November 13, 2001

For: **Method and Apparatus for a Parallel
Correlator and Applications Thereof**

Confirmation No.: 6140

Art Unit: 2124

Examiner: Malzahn, David H.

Atty. Docket: 1744.1200001

Fourth Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Fourth Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Third Supplemental Information Disclosure Statement filed on April 13, 2005 in connection with the above-captioned application.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Document AQ59 was cited in a Notice of Allowance in related U.S. Patent Application No. 10/290,323, filed November 8, 2002, entitled "Method and Apparatus for DC Offset Removal in a Radio Frequency Communication Channel," directed to related subject matter.

Document AH66 is a co-owned patent which is directed to related subject matter.

Document AI66 was cited in an Office Action in related U.S. Patent Application No. 09/550,642, filed April 14, 2000, entitled "Method And System For Down-Converting An Electromagnetic Signal, And Transforms For Same," directed to related subject matter. Also cited in said Office Action were U.S. Pat. Nos. 5,678,226 and 6,094,084, which have already been cited in the present application.

Document AA67 was cited in an Office Action in related U.S. Patent Application No. 09/476,092, filed January 3, 2000, entitled "Analog Zero IF FM Decoder And Embodiments Thereof, Such As The Family Radio Service," directed to related subject matter. Also cited in said Office Action were U.S. Pat. Nos. 5,600,680 and 5,606,731, which have already been cited in the present application.

Documents AB67-AE67 were cited in an Office Action in related U.S. Patent Application No. 09/567,977, filed May 10, 2000, entitled "Optical Down-Converter Using Universal Frequency Translation Technology," directed to related subject matter. Also cited in said Office Action was Stewart, R.W. and Pfann, E., "Oversampling and sigma-delta strategies for data conversion," *Electronics & Communication Engineering Journal*, IEEE, pp. 37-47 (February 1998), which has already been cited in the present application.

Documents AF67 and AG67 were cited in a Notice of Allowance in related U.S. Patent Application No. 09/632,855, filed August 4, 2000, entitled "Wireless Local Area Network (WLAN) Using Universal Frequency Translation Technology Including Multi-Phase Embodiments," directed to related subject matter.

Document AH67 was cited in an Office Action in related U.S. Patent Application No. 09/796,824, filed March 2, 2001, entitled "Phased Array Antenna Applications of Universal Frequency Translation," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 5,742,189, which has already been cited in the present application.

Document AI67, AA68, and AB68 were cited in an Office Action in related U.S. Patent Application No. 10/318,207, filed December 13, 2002, entitled "Method And Apparatus For Reducing Re-Radiation Using Techniques Of Universal Frequency Translation Technology," directed to related subject matter.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

- ☐ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of _____ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is

provided in satisfaction of the requirement for a concise explanation of relevance.
1138 OG 37, 38.

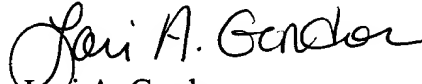
- ☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).
- ☒ 7. A copy of document AQ59 is enclosed. However, in accordance with 37 C.F.R. § 1.98(a)(2), copies of the U.S. patents and patent application publications cited on the attached Form PTO-1449 are not enclosed.
- ☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).
- ☐ 9. It is expected that the examiner will review the prosecution and cited art in the parent application no. _____, and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed Form PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Lori A. Gordon
Attorney for Applicants
Registration No. 50,633

Date: August 11, 2005

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Washington, D.C. 20005-3934
(202) 371-2600

427791_1.DOC

FORM PTO-1449

ATTY. DOCKET NO.
1744.1200001APPLICATION NO.
09/987,193**FOURTH SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT**FIRST NAME INVENTOR
Gregory S. RAWLINSFILING DATE
November 13, 2001ART UNIT
2124**U.S. PATENT DOCUMENTS**

| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE |
|---------------------|--------------|-----------------|---------|------------------------|-------|-----------|-------------|
| | AA | | | | | | |
| | AB | | | | | | |
| | AC | | | | | | |
| | AD | | | | | | |
| | AE | | | | | | |
| | AF | | | | | | |
| | AG | | | | | | |
| | AH66 | 6,879,817 B1 | 04/2005 | Sorrells <i>et al.</i> | | | |
| | AI66 | 6,057,714 | 05/2000 | Andrys <i>et al.</i> | | | |

FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|---------------------|--------------|-----------------|------|---------|-------|-----------|-------------|
| | AJ | | | | | | Yes No |
| | AK | | | | | | Yes No |
| | AL | | | | | | Yes No |
| | AM | | | | | | Yes No |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

| EXAMINER INITIAL | DOC. REF. | CITATION |
|---------------------|--------------|--|
| | AN | |
| | AO | |
| | AP | |
| | AQ59 | Hellwarth, G.A. and Jones, G.D, "Automatic Conditioning of Speech Signals," <i>IEEE Transactions on Audio and Electroacoustics</i> , Vol. AU-16, No. 2, pp. 169-179 (June 1968). |
| | AR | |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

ATTY. DOCKET NO.
1744.1200001APPLICATION NO.
09/987,193

FOURTH SUPPLEMENTAL

INFORMATION DISCLOSURE STATEMENT

FIRST NAME INVENTOR
Gregory S. RAWLINSFILING DATE
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U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE |
|---------------------|--------------|-----------------|---------|--------------------------|-------|-----------|-------------|
| | AA67 | 2003/0081781 A1 | 05/2003 | Jensen <i>et al.</i> | | | |
| | AB67 | 5,994,689 | 11/1999 | Charrier | | | |
| | AC67 | 6,512,544 B1 | 01/2003 | Merrill <i>et al.</i> | | | |
| | AD67 | 6,628,328 B1 | 09/2003 | Yokouchi <i>et al.</i> | | | |
| | AE67 | 6,801,253 B1 | 10/2004 | Yonemoto <i>et al.</i> | | | |
| | AF67 | 3,737,778 | 06/1973 | Van Gerwen <i>et al.</i> | | | |
| | AG67 | 4,286,283 | 08/1981 | Clemens | | | |
| | AH67 | 4,241,451 | 12/1980 | Maixner <i>et al.</i> | | | |
| | AI67 | 5,014,130 | 05/1991 | Heister <i>et al.</i> | | | |

FOREIGN PATENT DOCUMENTS

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| | AJ | | | | | | Yes No |
| | AK | | | | | | Yes No |
| | AL | | | | | | Yes No |
| | AM | | | | | | Yes No |

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| | AO | |
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| | AR | |

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ATTY. DOCKET NO.
1744.1200001APPLICATION NO.
09/987,193FOURTH SUPPLEMENTAL
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2124**U.S. PATENT DOCUMENTS**

| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE |
|---------------------|--------------|-----------------|---------|----------------------|-------|-----------|-------------|
| | AA68 | 5,390,215 | 02/1995 | Anita <i>et al.</i> | | | |
| | AB68 | 5,805,460 | 09/1998 | Greene <i>et al.</i> | | | |
| | AC | | | | | | |
| | AD | | | | | | |
| | AE | | | | | | |
| | AF | | | | | | |
| | AG | | | | | | |
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| | AJ | | | | | | Yes No |
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